ABSTRACT OF THE DISCLOSURE

A synchronous rectifier comprising a MOSFET device, and a gate driver for driving the gate of the MOSFET device, the MOSFET device comprising first and second MOSFET transistors coupled with their drain-source paths in parallel to receive an alternating current waveform for rectification by the drain- source paths of the MOSFET transistors, the first transistor having a low Rdson and the second transistor having a high Rdson whereby the apparent Rdson of the MOSFET device is increased when the current through the MOSFET device is below a threshold thereby enabling zero crossing detection.